PRINTING PRESS books letterpress GUTENBERG

NATIONAL PRINT MUSEUM
Músaem Náisiúnta Cló

Primary School Curriculum Links

bookbinding MANUSCRIPT books

tablet illuminate PAPYRUS TYPE scribe

Printing and Bookmaking

Teacher's Fact and Activity Pack

Interactive Classroom Activities

Did you know that without the printing press, books like the ones we read today would not exist?

This Primary School Teacher's Fact and Activity Pack will take your pupils on a journey of discovery through the history of books, where they will learn how the invention of the printing press changed the way books were made so that everyone can enjoy them today!

FUN

suitable for 4th - 6th Class

Factsheets

Where did it all begin?

The First Books before the Invention of the Printing Press

Clay tablet with cuneiform script from ancient Mesopotamia.

Clay Tablets

The very first form of the book can be found over 5000 years ago (3300 BC) in ancient **Mesopotamia** (today's Iraq). These ancient people wrote on **clay tablets** in a script called **cuneiform**. Cuneiform is one of the earliest forms of writing and its 'letters' are made up of **wedge shaped** characters. The people who wrote on clay tablets were known as **scribes**. Scribes used a stylus, which was made from a dried blunt reed (a type of tall grass), to write upon a wet tablet. This made it easy for them to carve out their script. Once finished, the scribe would leave the tablet out in the sun to dry. If he wanted to use the tablet again, he would soak it in water and then wipe the cuneiform characters away (an ancient form of recycling). So what did they write about? These ancient scribes wrote about events that were happening during their time (like a journalist writes for a newspaper today) and they also recorded myths, fables, poetry, and the laws of the land.

Cuneiform script code breaker!

Interesting fact...
The word cuneiform comes from the Latin word cuneus which means 'wedge'.

Ancient Egyptian scroll

Scrolls

The next form of the book after the clay tablet was the scroll. **Ancient Egyptian** scribes began writing on scrolls made from **papyrus** around 5000 years ago (3000 BC). Papyrus is a material like paper, which was made from the papyrus plant. This plant once grew in large amounts in Egypt along the banks of the river Nile. An ancient scroll was made by gluing separate sheets of papyrus together to create one long sheet. This was then rolled into a scroll and sometimes a wooden roller would be attached to each end. Egyptian pens were made from thin, sharp reeds which were dipped into ink made from plants and soot. The ancient Egyptian scribes used scrolls to record information about their religion and government. They wrote in **hieroglyphics**, a type of writing which is made up of pictures and symbols.

Papyrus was unsuitable to use in the damp rainy countries of Europe, as once there it began to rot very quickly. So the Europeans used **parchment** made from animal skin instead. Today we cut down many forests to make our books, however in ancient times people had to slaughter 1000s of animals, including cattle, sheep, rabbits and even squirrels, to make their books!

Did you know ?

A huge number of clay tablets have been excavated by archaeologists in countries like Iraq and Iran and over half a million are yet to be translated and read by historians.

Curriculum Links

History:
Working as a Historian: Time and chronology, Change and continuity, Cause and effect, Using evidence. Strands: Story, Early people and ancient societies, Continuity and change over time

English:
Strands: Competence and confidence in using language (Units: Reading: Reading for pleasure and information; Developing interests, attitudes, information retrieval skills and the ability to think; Responding to text)

The Codex

In the 1st century AD (nearly 2000 years ago), the Romans developed a style of book that looked much like the books we use today. It was called the **codex**. Codices were made by folding and sewing pages together on one side and placing a protective cover on top. The codex was much easier to use than the scroll because it was sturdy, easy to carry and easy to read. By the 4th century AD, codices made from papyrus or parchment had completely replaced the use of scrolls. The development of the codex was the most important development in the history of the book before the printing press was invented nearly 1000 years later.

Early codex with a leather and wooden cover

Codices

Interesting fact...
Historians have found notes written by scribes in the margins of very old manuscripts. Scribes scribbled complaints like 'I'm too cold', 'My back is sore' and 'This parchment is too hairy!'

Did you know?
It was an illuminator's job to add decorative letters and pictures to pages to make the medieval manuscripts more beautiful. By the 7th century AD, the illumination of manuscripts had become a very respected art. The most beautiful and famous manuscripts were created in Ireland!

Medieval Manuscripts and Scribes

During the Middle Ages in Europe (5th – 15th centuries AD), every book had to be written out by hand. These books were called **manuscripts**. The majority of manuscripts were copies of religious texts like the Bible. If you wanted a copy of the same book, you had to write it out by hand and if you wanted another copy, you had to write it out again and again and again... (It was a bit like doing lines if you have been naughty in school!). Medieval scribes carried out this difficult work. Most scribes were monks living in monasteries all over Europe and they carried out their work in a room called a **scriptorium**. A scribe's pen was called a **quill** and it was made from a bird's feather. The ink they used was made from ashes, plants and egg white. Scribes wrote on parchment, but they also began to write on paper during the 10th century AD. Paper was invented in China and it made its way to Europe during this time.

It took months and sometimes years to complete just one manuscript. Because of the time and skill needed to create just one copy, this meant that books were very rare and very expensive. Books were owned mainly by religious orders, universities and the very rich. With very little or no access to books, most people in the Middle Ages did not learn to read and because of this, they knew very little about the world around them.

Medieval Manuscript and goose feather quill

Medieval scribe at his work station with manuscript and quill

Curriculum Links

History:
Working as a Historian: Time and chronology, Change and continuity, Cause and effect, Using evidence.
Strands: Story, Early people and ancient societies, Continuity and change over time, Life, society, work and culture in the past

English:
Strands: Competence and confidence in using language (Units: Reading: Reading for pleasure and information; Developing interests, attitudes, information retrieval skills and the ability to think; Responding to text)

Inventing the printing press

Johann Gutenberg, Movable Type and the Wooden Printing Press

Chinese wood block images and letters

Early Printing

So what is 'printing'? Printing is the transfer of words or pictures with ink onto paper, using a **wooden block**, a **printing press** or another similar machine. Printing was invented in **China** sometime in the 8th century AD. The Chinese way of printing was simple and worked very like a **stamper and inkpad**. Letters and images were carved onto a wooden block and the block was then covered with ink. A piece of paper was then placed on to the block and rubbed so the image would transfer to the paper (remember paper was invented in China too!). The wooden block could be inked up again so that many copies could be made. People in different countries, like China and **Korea**, experimented with different ways of speeding up printing. However, the person who invented printing, as we know it today, was a German man named **Johann Gutenberg.**

Johann Gutenberg

Johann Gutenberg

During the 15th century in Europe, there was an increase in the number of people wanting to learn about the world around them. This led to a big demand for books. Many scribes now worked in towns and cities, copying hundreds of books, to try to meet this increased demand. One such town was **Mainz in Germany** and it was here in 1440 that **Johann Gutenberg** had an idea that would make it possible to produce lots of books much more quickly than having to write them out by hand.

Johann Gutenberg was born in Mainz sometime around 1400. At an early age, Johann worked with metal and gold and made fine jewellery and souvenirs. Gutenberg saw how difficult it was to make books, so he decided to use his experience as a metalworker to invent a way of making books at a faster speed. Gutenberg decided to work in secret, as he did not want anyone to steal his idea!

Interesting fact...

Johann Gutenberg's real name was Johann Gensfleisch zur Laden (bet you can't say that quickly!)

Did you know ?

In the 11th century, a man named Bi Sheng in Korea invented an early form of movable type, using clay blocks. Gutenberg did not know about Bi Sheng and his invention when he invented his metal movable type 400 years later!

Inventing the Printing Press

Gutenberg did not just invent one thing, but three - **movable type**, a new **ink** and the **wooden printing press**.

Movable Type

Movable Type - What is that?

Movable type is simply letters of the alphabet made out of metal. To create movable type Gutenberg carved each letter of the alphabet onto the top of a thin piece of metal. This was called a **punch**. He then took the punch and hammered the letter end into a softer metal to create a **mould** (this looked something like a mould used for making cookies!). Gutenberg then poured hot liquid metal into the mould. When the metal cooled a piece of movable type was cast. When all the letters of the alphabet were cast, Gutenberg used the movable type like jigsaw pieces and fit them together to make words. He then put the words together to create a whole page of a book.

New Ink

Gutenberg developed a special ink that was made from **plant oil and soot**. This new ink stuck to paper in a much better way than previous water based inks. He then rubbed the ink onto the movable type using a big sponge-like object called a **dauber**. Gutenberg now needed something to help transfer the ink from the movable type onto his paper, so he invented the first printing press.

The Wooden Printing Press

Gutenberg got the idea for his printing press from the large wooden presses used for pressing wine from grapes in his hometown. So how did it work? Gutenberg placed the movable type into the **bed** of the printing press. He then covered it with ink and placed a piece of paper on top. The printing press had a lever that operated a **platen** (a large flat piece of wood). When Gutenberg pulled the lever, it pushed the platen down on to the page, ink and movable type. The pressure transferred the ink onto the page to create a print. He would then insert a new piece of paper and repeat the same steps. Once he had made enough copies of one page, Gutenberg rearranged his movable type to make another page and **printed** this page in the same way. This was much quicker than having to write the whole page out again by hand.

A wooden printing press similar to Gutenberg's invention

The Gutenberg Bible

The first book Gutenberg printed was the Bible. A few copies were printed on **vellum** (calfskin) but most were printed on paper. The **Gutenberg Bible** has 1,272 pages and each page has 42 lines. That is why it is sometimes known as the **42 Line Bible**. Gutenberg worked on his secret project for 15 years and the Gutenberg Bible was completed in 1455. Gutenberg borrowed a lot of money to get his print shop up and running from a businessman called Johann Fust. When he began printing his bibles, Fust demanded his money back. Gutenberg did not have the money to pay him, so he gave Fust his printing press and print shop to pay off his debt. Sadly, it was Fust, not Gutenberg, who became rich from selling the 42 Line Bible!

A print workshop during Gutenberg's time

Interesting fact...
Gutenberg printed 150 copies of his Bible, however there are just 48 surviving copies in the world today. They are mainly found in big museums, universities and libraries in the UK, USA and Germany.

Curriculum Links

History:
Working as a Historian: Time and chronology, Change and continuity, Cause and effect, Using evidence.
Strands: Story, Continuity and change over time, Life, society, work and culture in the past, Eras of Change and Conflict
English:
Strands: Competence and confidence in using language (Units: Reading: Reading for pleasure and information; Developing interests, attitudes, information retrieval skills and the ability to think; Responding to text)
Visual Arts:
Strands: Print
Science:
Strand Unit: Forces

How Johann Gutenberg's invention changed the world!

The Spread of Printing - Have Book, Will Read!

Gutenberg's invention was a great success and it was not long before his new printing technology spread far and wide. By 1500, there were nearly 1000 printing workshops in Europe. Because books were now easier and quicker to make, this meant that they were much cheaper to buy. More people than ever before could afford to buy books and this led to many people learning how to read (**mass literacy**).

Before Gutenberg's invention, most books were religious texts like the Bible. As the new technology spread, new books about art, science and books just for entertainment were printed all over Europe. Other things like maps, music and newspapers were also printed. Just as we use television, radio and the internet today, the printing press helped people all over the world to communicate with each other and find out about the world around them.

Printed map of the world from the year 1635

The Renaissance, Reformation and Scientific Revolution - Impossible without the Printing Press!

The Renaissance

Between the 14th and 17th centuries, a movement called the **Renaissance** took place in Europe. The Renaissance was a time of great creativity, imagination and curiosity. During this time, there was a rebirth of interest in science, art and education and great leaps were made in each discipline. Without the invention of movable type and the printing press by Gutenberg, the Renaissance would not have been possible. Newly printed books helped to spread new ideas quicker and farther than ever before.

The Reformation

The **Reformation**, which occurred during the Renaissance period, was when a split happened in the **Catholic Church** and a new type of **Christianity** called **Protestantism** was born. Without the invention of movable type and the printing press by Gutenberg, the Reformation might never have happened. As we know, before Gutenberg many people in Europe did not know how to read, so they depended on the Church to help them understand the Bible. After Gutenberg, people were able to read the Bible for themselves for the first time. This led to people making up their own minds about the teachings of the Bible.

The Scientific Revolution

The development of modern science would also not have been possible without the invention of movable type and the printing press by Gutenberg. His invention made it much easier to create and print many copies of scientific books, diagrams, maps and charts. This led to the spread of scientific ideas across Europe and by the end of the 16th century, anyone who could read could learn all about geometry, anatomy, astronomy and physics.

Did you know ?

Gutenberg's invention of printing did not come to Ireland until 1551, when a man called Humphrey Powell was sent by Queen Elizabeth I to print a Protestant prayer book called the Book of Common Prayer. It was hoped that the book would help convert the Irish Catholic population to Protestantism (the new religion born out of the Reformation), but it did not work.

Curriculum Links

History:
Working as a Historian: Time and chronology, Change and continuity, Cause and effect, Using evidence.
Strands: Story, Continuity and change over time, Life, society, work and culture in the past, Eras of Change and Conflict, Politics, Conflict and Society

English:
Strands: Competence and confidence in using language (Units: Reading: Reading for pleasure and information; Developing interests, attitudes, information retrieval skills and the ability to think; Responding to text)

Science:
Strand Unit: Science and the environment

1450-1800 - The Wooden Printing Press Endures

During this period, there were very few changes to Gutenberg's system of printing. All books were still printed by hand using his invention of the wooden printing press and movable type!

1800-1950 - Need for Speed

Iron Hand Printing Presses

It was during this time that many changes happened to help speed up the process of printing books. In 1815, an American man called **George Clymer** created a printing press made completely from iron. Clymer called it the **Columbian Press** and he decorated his machine with symbols representing America, like the eagle. The Columbian printing press worked in a similar way to Gutenberg's printing press, but because it was made from iron it was more durable and it could make a clearer and larger print. It could print up to 250 pages per hour.

George Clymer's Columbian Press

Mechanised Printing Presses

In the early 1800s, during the **Industrial Revolution**, many new printing presses were invented to speed up the printing of books. In 1812, a German man, **Frederick Koenig**, invented the first steam-driven printing press and it could print up to 400 pages per hour. Soon after, in America, **Richard Hoe** invented the first **cylinder printing press**. Cylinder printing presses were much faster than any other press and could print up to 4000 pages per hour. In 1844, Hoe also invented the **rotary press**. This machine was great for printing newspapers and could print up to 8000 pages per hour. In 1865, another American man called **William Bullock** invented a printing press that could be fed by one long roll of paper. It could print up to a whopping 30,000 pages per hour!

Ottmar Mergenthaler's Linotype

Hot Metal Typesetting

Setting movable type to create a page was the slowest part of the printing process. This changed with the arrival of **hot metal typesetting machines**. In 1884, a German inventor, **Ottmar Mergenthaler**, invented the first hot metal typesetting machine - the **Linotype**. It did exactly what its name says - it produced a full line-of-type. A Linotype operator typed lines of words on a keyboard and this formed rows of moulds of letters. Then hot metal was squirted into the moulds to create metal lines of type. These lines were stacked together to create a full page for printing.

Printing Books Today - The Computer Revolution

All of the above developments in the printing of books were processes that Gutenberg himself would have understood. However, it is the big changes that happened after the 1950s, that would have left poor Gutenberg scratching his head. The printing of books was completely revolutionised by the invention of computers. Computers are now used in nearly every stage of printing a book. This makes the process much easier, faster and cheaper. Today, anyone who owns a computer can be an author, editor, compositor and printer all rolled into one!

Did you know ?

William Bullock was killed by his own invention! A few years after he invented his printing press, his foot was crushed while he was working on setting up a new machine. His foot developed gangrene and he died during the amputation.

Curriculum Links

History:
Working as a Historian: Time and chronology, Change and continuity, Cause and effect, Using evidence.
Strands: Story, Continuity and change over time, Life, society, work and culture in the past, Eras of Change and Conflict

English:
Strands: Competence and confidence in using language (Units: Reading: Reading for pleasure and information; Developing interests, attitudes, information retrieval skills and the ability to think; Responding to text)

Science:
Strand Unit: Science and the environment

Bookbinding and the future of the printed book

Decorative Book Cover

We have learned all about how words were printed onto a page in order to create a book during Gutenberg's time up until the middle of the 20th century. However, making a book did not stop once the ink had dried on the page. To create a finished book, craftspeople, known as **bookbinders**, bound the printed pages together by hand.

Traditional Bookbinding

To bind a book, the printed sheets were first folded into sections that were multiples of 4, 8, 16, 32 and upwards. (Fold a piece of paper in half, then in half again. This will show you how it works). Next, the sections, which were called **signatures,** were gathered by hand and sewn together on the folded side using a special **sewing frame**. The gathering of the signatures had to be done very carefully to make sure that they were in the correct order. Once all the signatures were sewn together, the bookbinder trimmed the pages of the book to make sure that they were all the same size. A machine called a **guillotine** was used to make even, smooth pages.

Before the cover was attached to the book, sheets of paper known as **'end papers'** were attached to the first and last sections of the book. End papers could be works of art in themselves, especially in expensive books. A design called marbling was often used. The next stage was to attach the cover to the book. The cover was sewn on with a thicker thread. Early book covers were usually made from wood covered with leather. In later years, this changed to cardboard covered with leather.

E-book versus the printed book - which do you prefer?

Adding Decorations

The bookbinder would also decorate the cover of the book. Very expensive books sometimes had gold leaf attached to the front cover and spine of the book. Some would have decorative headbands, ribbons and dried flowers attached. The more money the person who gave the book to the binder had, the more decorative their book would be once it was finished!

Bookbinding Today

Today, books are bound in a very similar way to how they were bound in the past, however much of the work is now carried out by machines. Pages are still sewn together however; a stitching machine now does this work. Most books today are paperbacks. **Paperbacks** cost much less to make than hardbacks because the pages are held together by glue instead of being stitched.

Did you know?

Many believe that today the Bible is the most printed and read book of all time, however in the 16th century the world's bestselling book was not the Bible but a handbook on good manners for children!

The Future of Books

Thanks to computers, books can now be read on a computer screen or by using **electronic books** such as a Kindle. Many people love this way of reading; however, many still prefer to read books printed with ink on paper - which do you prefer? Can you imagine a world without printed and bound books? These are topics which can be explored with your pupils in class.

Curriculum Links

History:
Working as a Historian: Time and chronology, Change and continuity, Cause and effect, Using evidence.
Strands: Story, Continuity and change over time, Life, society, work and culture in the past

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Composing type and printing a proof

**Teachers - photocopy and share this infographic with your class before their visit to the Museum.*
At the National Print Museum or at an Outreach Workshop you will learn all about Gutenberg's invention of movable type and the printing press. You will learn how to handset your own name with movable type and print your very own poster. Before you arrive at the Museum or the Museum comes to you, use this infographic to learn, step by step, all about the special printing tools and materials you will use!

1. **Case of Type** - this is a wooden case where all the pieces of movable type are stored. Each letter of the alphabet has its own compartment in the case. The small letters (lowercase) and the capital letters (uppercase) are stored together in the one case.

2. **Movable Type** - these are pieces of metal with a raised letter of the alphabet on top. Type is available in many different designs such as Times New Roman and Garamond. Each style is known as a typeface or font.

3. **Compositor** - the compositor has the job of putting all the movable type together to get it ready for printing. In the past compositors were paid for their speed and docked wages if they made mistakes.

4. **Composing Stick** - this is a metal stick used by a compositor to set the type. The compositor holds the composing stick in their left hand and selects the type from the case with their right hand. The type is placed into the composing stick upside down and back to front.

5. **Galley and Cord** - once the composing stick is full, the compositor places the type onto a tray called a galley and ties it up with a piece of cord to keep it in place.

6. **Furniture and Chase** - the type is then transferred into a metal frame called a chase. Pieces of wood, called furniture, act as spacers between sentences, paragraphs and the sides of the page.

7. **Quoin and Key** - the type and furniture are then locked up tightly using small springs called quoins and a special key.

8. **Hammer and Plainer** - the final step before printing a proof is to level all the type and furniture with a hammer and a piece of wood called a plainer.

9. **Forme** - is a complete block of movable type which is ready for printing.

10. **Ink and Roller** - the ink is placed onto the forme with a roller.

11. **Proofing Press** - before the compositor hands the forme over to the printer to be printed, he first runs a quick print on a proofing press, to check for any mistakes.

12. **Printer** - the printer has the job of operating the printing press, which will print many of the pages set by the compositor.

Pre and post visit classroom activities

Activity 1 - Create a Clay Tablet (Factsheet 1)

Your pupils are scribes living and working in ancient Mesopotamia and they have written down everything they need to do their job on a clay tablet (see highlighted words on Factsheet 1). 6000 years later an archaeologist on a dig has found their clay tablets. They are brought to a scholar to translate. Using plasticine or modelling clay and the end of a paint brush or tip of a pencil, have your pupils recreate their tablets, using the English alphabet to write out what it said.

***Teachers will need** - plasticine or modelling clay, pencils or paintbrushes and a rolling pin. If you want to try out some cuneiform script, a code chart is available from our friends at the British Museum: http://www.britishmuseum.org/pdf/cuneiform.pdf

Cross-curricular links: History, Visual Arts and English

Activity 2 - Create a Classroom Scroll (Factsheet 1)

Create a sentence with as many words as there are pupils in the class (do not tell your class what the sentence is). Give each pupil in the class one word from the sentence at random. On an A3 or A4 page get each pupil to write their word down (in whatever writing style they choose). Next, ask the pupil with the first word of the sentence to tape the end of their page to the rolling pin (if using). Roll the page around the pin and ask the next pupil to attach their page to the first page and continue to roll the pages around the pin. When the last page is done, attach the open end to the rolling pin. Ask two pupils to hold each end of the scroll and unroll from one end. As it unrolls, have the whole class read out the sentence as it appears!

***Teachers will need** - A3 or A4 paper, pencils, crayons or colouring pencils, glue or tape, two rolling pins or two tube-like objects.

Cross-curricular links: History, Visual Arts and English

Activity 3 - Design and Create an Illuminated Letter (Factsheet 2)

Using simple steps, your pupils can create their very own illuminated letter, similar to those created by the illuminators of the past. First, have your pupils choose what letter they would like to create (this could be their own first initial or you might like to choose a letter of the alphabet for each pupil). Next, ask each pupil to choose a theme for their design e.g. flowers, animals, mosaic etc. Then, using the materials outlined below, have each pupil design and create their own illuminated letter.

***Teachers will need** - Paper, pencils, rulers, crayons or colouring pencils (gold crayons or colouring pencils would be ideal to create the gold leaf effect).

Cross-curricular links: History, Visual Arts and English

Activity 4 - Creative Writing: The 42 Line Story (Factsheet 3)

As we mentioned in Factsheet 3, the first book to be printed on Gutenberg's printing press was the 42 Line Bible. Ask your pupils to create a 42 Line Story, which includes a beginning, middle and end. This will introduce them to the idea of structure in relation to creative writing. If this activity is successful and you want to build on it, you could try a 42 Word Story. This is a fun way to explore vocabulary, grammar and punctuation. With the limit of 42 words, pupils will have to think carefully about each word that they want to include.

***Teachers will need** - Paper and pencils.

Cross-curricular links: History and English

Activity 5 - Create a Research Diary

If your pupils have joined a National Print Museum Bookmaking Workshop, they can use their completed handmade book as a Research Diary. Here is a list of ideas of how the Research Diary can be used by pupils in class.

1. To collect new vocabulary they discover in class.
2. To collect important and interesting facts they discover in class.
3. Mini Research Project: The printed book or the e-reader - which do you prefer? Discuss in class and have pupils use their book to write down their arguments for why they prefer either type of book.
4. Mini Research Project: The world without books. Discuss in class and have pupils use their book to write down what they think the world would be like without books to read.

Cross-curricular links: History and English

At the National Print Museum and Outreach Workshop activities

Activity 1 - Children's Interactive Tour and Outreach Workshop

The National Print Museum offers an educational, interactive and activity-based guided tour specifically designed for Primary School children. Your class will travel back in time to experience what it was like to be a young apprentice printer by exploring the Museum's Print Shop-style layout – the composing area, printing area and finishing area. Children learn all about Johann Gutenberg, the inventor of the printing press, and how newspapers, books and posters were created before the arrival of today's computers.

Through three tactile and engaging activities and working directly with artefacts from the Museum's collection, children learn about a selection of the traditional printing machines (1), are given the opportunity to experience traditional hand-setting and printing (2) and using the Japanese paper craft of Origami learn how to make and decorate their very own printer's hat (3). In addition, children test their knowledge with our Primary School workbook!

Contact the Education Officer - education@nationalprintmuseum.ie - for more information on how to book, cost, maximum numbers etc. *Elements 2 and 3 are available as part of our Outreach programme.

Activity 2 - Bookmaking Workshop (see Factsheet 2 & 7)

Teachers can book a Bookmaking workshop at the National Print Museum or have the Museum come to you as part of our Outreach Programme. In this workshop, using traditional and modern methods and materials, children learn to handcraft their own hardback book, which they then decorate and personalise with fun craft materials such as feathers, sequins, ribbon and fancy paper. Children can use their completed book as a diary, sketchbook or notebook.

Contact the Education Officer - education@nationalprintmuseum.ie - for more information on how to book, cost, maximum numbers etc.

Printing and Bookmaking Wordsearch

G	C	V	Q	C	J	B	I	I	S	X	G	W	O	V	G	S	S	O	J
J	Y	R	N	X	D	D	V	L	S	T	B	R	Y	Q	T	K	A	J	Z
M	S	M	O	V	E	A	B	L	E	T	Y	P	E	W	Z	O	S	N	L
G	S	K	I	E	D	D	Z	B	R	Y	R	B	T	B	I	R	P	D	I
M	G	P	T	H	B	X	O	T	P	I	R	C	S	U	N	A	M	H	X
J	W	A	A	B	G	O	O	C	N	A	C	G	N	S	L	E	O	H	A
F	Y	Q	M	W	L	R	O	T	A	N	I	M	U	L	L	I	T	J	I
C	A	I	R	S	J	Z	I	K	I	P	V	S	O	B	B	I	C	U	X
A	U	C	O	Q	Z	N	C	R	B	V	Q	R	I	X	J	S	L	D	G
P	J	N	F	P	G	Q	S	K	M	I	C	B	M	Y	W	Y	H	Y	I
R	Y	N	E	P	A	P	Y	R	U	S	N	Z	N	C	Y	D	G	Y	X
K	S	C	R	I	B	E	I	D	L	E	E	D	I	L	O	Z	D	J	V
I	Y	E	W	C	F	L	I	N	O	T	Y	P	E	Q	X	O	L	P	O
G	S	P	Q	E	L	O	F	R	C	N	E	B	G	R	S	H	S	N	O
S	V	E	D	W	O	E	R	T	H	X	M	B	E	E	G	E	T	W	D
B	T	G	E	I	V	M	H	M	G	W	K	P	Y	V	I	O	C	M	J
W	M	Y	K	R	D	R	K	N	O	S	M	V	H	D	W	B	O	Q	Q
E	K	R	U	B	Z	O	U	L	W	W	C	Z	C	G	E	K	Y	H	M
L	J	V	X	I	J	F	O	Z	X	H	K	K	V	C	Q	F	D	D	X
M	N	Y	B	S	C	Q	Y	I	M	Y	S	D	A	L	Y	H	I	Z	P

AVIVA STADIUM

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BIBLE
BOOKBINDER
CODEX
COLUMBIAN PRESS
CUNEIFORM
EBOOK
GUTENBERG
ILLUMINATOR
LINOTYPE
MANUSCRIPT
MOVABLE TYPE
PAPYRUS
PRINTING PRESS
REFORMATION
SCRIBE
SCROLL

NATIONAL PRINT MUSEUM
Músaem Náisiúnta Cló

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